REFINED
LASER SYSTEMS

PICUS DUO

PICOSECOND LASER SOURCE FOR COHERENT RAMAN IMAGING

The **PICUS DUO** is the ideal laser source for multicolor CARS and SRS imaging. The turn-key **PICUS DUO** offers a compact footprint, no need for water cooling or an isolated table.

Wavelength conversion in an all-fiber optical parametric oscillator, pumped by a stable fiber laser provides an unmatched combination of tuningspeed and tuning range.

HIGHEST AVAILABLE TUNING SPEED

- Tunable in ms across 700 - 3100 cm^{-1}
- No external delay required
- Integrated spectrometer

OPTIMIZED FOR CARS & SRS MICROSCOPY

- Stokes output shot-noise limited at 1 mA
- Optional integrated AM modulator (20, 10, 6 MHz)
- Balanced detector available (down to -170dBc/Hz)

CARE-FREE OPERATION

- Plug & Play installation
- Hands- and maintenance-free operation
- Air-cooled & compact: 42x45x25 cm^3

Applications

CRI with inter-image wavelength switching

Live virtual H&E contrast via CRI

Multicolor pump-probe experiments

Contact us for various customizations!

info@refined-lasers.com www.refined-lasers.com

Product Specifications

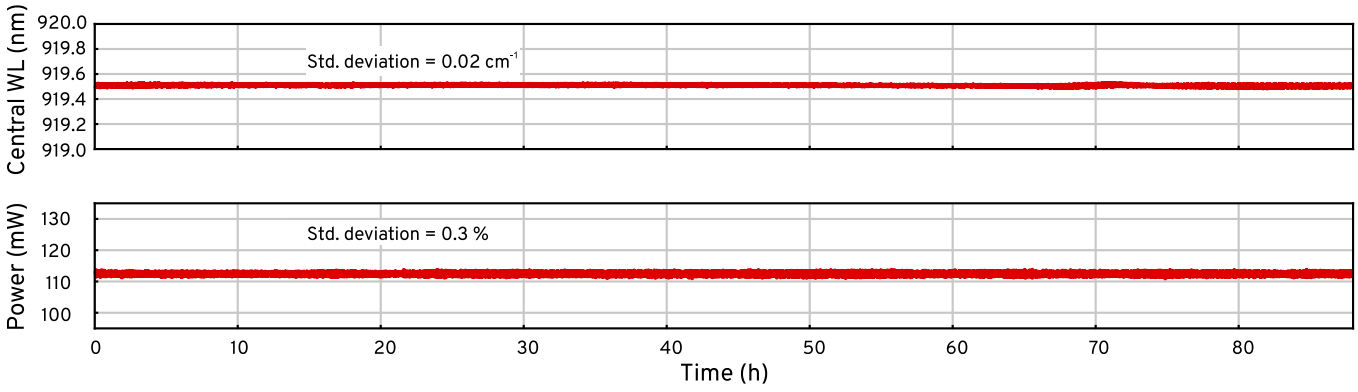
Optical	Output A	Output B
Tuning range	780 - 980 nm	1025 - 1055 nm
Tuning speed	< 100 ms	
Average power	100 - 250 mW	> 300 mW
Covered wavenumbers	700 - 3100 cm^{-1} monitored with 0.1 cm^{-1} precision	
Typical pulse duration	7 - 10 ps	2 - 3 ps
Spectral bandwidth	< 12 cm^{-1}	
Repetition rate	~40.5 MHz	
Typical RIN noise Stokes at 20MHz	<-157dBc/Hz	
Integrated tunable delay	> 5 cm	

Electrical	
Interfaces	Communication through USB or RS232 Trigger in for high speed wavelength tuning Monitor out for external synchronisation
Software interfaces	GUI and custom serial API, e.g., via Python & Matlab

Mechanical	
Laser head (pump laser integrated)	42x45x25 cm^3
Laser controller dimension	43x45x13 cm^3
Cooling	Air-cooled
Weight	25 kg
Standard umbilical length	1.8 m

Performance

Typical long term stability



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The product is constantly being improved, therefore the specifications are subject to change without notice. December 2023 | Rev. 4.2

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